

---

# Offsets in Defense Trade Fifth Annual Report To Congress

Prepared By The U.S. Department of Commerce

[The following material is extracted from an May 2001 U.S. Department of Commerce study entitled, *Offsets in Defense Trade*, a Study Conducted Under Section 309 of the Defense Production Act of 1950, as amended.<sup>1</sup> The report was produced by the Strategic Analysis Division in the Office of Strategic Industries and Economic Security of the Bureau of Export Administration (BXA). This report covers the six-year period from 1993 through 1998. Some of the footnotes and tables have been omitted; the footnote and table numbers remain the same as in the original. Complete copies are available for sale from the Government Printing Office by calling (866) 512-1800 and requesting publication #003-009-00722-4.]

## Introduction

### Legislation and Regulations

In 1984, Congress enacted amendments to the *Defense Production Act of 1950*, which included the addition of Section 309.<sup>3</sup> Section 309 requires the President to submit an annual report on the impact of offsets on the United States to the then Committee on Banking, Finance, and Urban Affairs of the House of Representatives and the Committee on Banking, Housing, and Urban Affairs of the Senate.

When Section 309 was first enacted, the Office of Management and Budget (OMB) was appointed the interagency coordinator in the preparation of the annual offsets report for the Congress. The report was to be produced in consultation with the Departments of Commerce, Defense, and Labor, and the Office of the United States Trade Representative. This interagency reporting requirement continued, with minor adjustments, until 1992, when the Congress amended Section 309 by requiring the Secretary of Commerce to perform the interagency coordination role.<sup>4</sup> The Department of Commerce sent its first annual report to Congress in 1996.

Section 309 authorizes the Secretary to develop and administer regulations to collect required offset data from the defense industry for the report. This responsibility was delegated to the Department's Bureau of Export Administration (BXA). The Department's offset regulations were published in the *Federal Register* in 1994 (59 FR 61796, Dec. 2, 1994, codified at 15 CFR Part 701). The 1992 amendments to section 309 also reduced the offset agreement threshold from \$50 million to \$5 million for U.S. firms entering into foreign defense sales contracts subject to offset agreements. On a per-transaction level, firms report all offset transactions for which they receive offset credits of \$250,000 or more. An itemized list of information that is collected annually from industry is in Section 701.4 of the Department's offset regulations.

The official U.S. government policy, developed in 1990, views offsets as economically inefficient and market distorting. Offsets introduce a new element into the purchase decision unrelated to the price or quality of the products. The policy states that the U.S. government will not encourage or enter into any such agreements itself nor provide financing for such arrangements. The decision whether to engage in offsets, and the responsibility for negotiating and implementing offset arrangements, resides with the companies involved. The U.S. policy

---

<sup>1</sup>Codified at 50 U.S.C. app. 2099 (1999 and Supp. 2000).

<sup>3</sup>See P. L. 4, 98 Stat. 149.

<sup>4</sup>See P. L. 102-558, Oct. 28, 1992, 106 Stat. 4198.

---

also calls for consultations with our allies regarding limiting the adverse effects of offsets in defense procurements.<sup>5</sup>

## 1.2 Offset Definitions

While there are different definitions of offsets used by industry and government for different purposes, for this report offsets in defense trade are industrial compensation practices required as a condition of purchase in either government-to-government or commercial sales of defense articles and/or defense services as specified in the *International Traffic in Arms Regulations*.

### 1.21 Offset Agreements

Offset agreements are commercial contracts between a defense firm and a foreign government. As noted above, the United States government does not actually enter into any offset agreements. Only in rare instances are offset agreements concluded between a defense firm and a foreign firm. The purchasing government decides how much compensation is required and what type of offset it desires. Firms can propose various products and services, but ultimately it is the foreign government's decision what the offset will entail. The value of the offset, and therefore the credit amount the defense firm receives for providing that offset, is assigned by the foreign government as well. Offset agreements specify a certain percentage of the value of the export sale.<sup>6</sup>

Penalties are used to motivate defense firms to fulfill their offset obligation in the time allotted by the contract. There are several different kinds of penalties: liquidated damages, non-performance measures, and best efforts. For liquidated damages, if a firm fails to fulfill all offsets by the stipulated deadline, it must pay a percentage (usually 5-20 percent) of the total value of the export contract. The percentage is specified in the contract non-performance penalties dictate that firms must pay a prearranged percent (2-10 percent) of all obligations not fulfilled in the allotted time. In best efforts clauses, there really is no penalty for non-fulfillment of the contract; the firm is judged to be acting in good faith to meet its obligations. However, firms' reputations can be jeopardized if offset obligations are not fulfilled as stated in the contract; non-fulfillment would likely result in the U.S. defense firm being excluded from future procurements by that purchasing government.

When a defense firm enters into an offset agreement with a foreign government, foreign firms receive the benefits from the offset; these companies are the *offset recipients*. For example, in a direct offset a U.S. company sells a defense item to a foreign country with an offset obligation requiring that components worth 50 percent of the export contract to be built locally; the foreign companies manufacturing these components are the offset recipients. In an indirect offset, a foreign government may require the U.S. company to provide export assistance for small and medium sized companies in various industries; these companies are the offset recipients.

The *offset fulfiller* is the company that provides the offset compensation; this is usually the defense firm who signed the offset agreement. However, there are times when the obligation is not related to the defense firm's specialty and therefore is contracted out. This is generally the case with indirect offsets. For example, if marketing is a component of the offset requirement, the defense firm may hire a marketing company to satisfy the obligation. The marketing firm is the offset fulfiller.

---

<sup>5</sup>Congress incorporated this policy into law with an amendment to the *National Defense Authorization Act* (P. L. 102-558, Title I, Part C, §124, 106 Stat. 4207).

<sup>6</sup>For example, if the defense item exported sold for \$1 million and the corresponding offsets agreement was for \$1.2 million, the offsets percentage would equal 120 percent.) The specific requirements of offset agreements are *offset obligations*.

---

## 1.22 Offset Transactions

Companies fulfill their offset obligations over a period of time specified in the offset agreement through a series of *offset transactions*. *Offset transactions* are the actual delivery of compensation towards the outstanding balance of an existing offset agreement. For example, a U.S. firm sells a defense item to a foreign government for \$1 billion with 50 percent offset to be fulfilled within ten years. The U.S. company completes \$50 million of offset benefits in one year by providing training related to the defense item sold; this is one of many offset transactions that will fulfill the total offset commitment. In a growing number of cases, U.S. defense firms are submitting transactions to foreign governments for credit, only to have the transaction rejected. In the Netherlands, for example, these rejections are adding almost 50 percent to the country's current 100 percent offset demands.

Offset transactions have an *actual* and *credit value*. The actual value of the offset transaction is the market value of the offset. The foreign government placed a credit value on the offset based on its economic priorities. The credit value may be greater than the actual value of the offset. Foreign governments use *multipliers* (which increase the actual value) to provide firms with incentives to offer offsets in targeted areas of economic growth. A multiplier is applied to the off-the-shelf price of a more desirable service or product offered as an offset, thus giving a higher credit value to the defense firm towards fulfilling an offset obligation. For example, a foreign government interested in a specific technology may offer a multiplier of six. A U.S. defense company with 120 percent offset obligation from a \$1 million sale of defense materiel would ordinarily be required to provide technology transfer through an offset equaling \$1.2 million. With a multiplier of six, however, the U.S. company could then offer only \$200,000 (actual value) in technology transfer for a \$1.2 million credit value and fulfill its entire offset obligation.

Offsets are divided into two different types, direct and indirect. When the type of compensation, or offset, is directly related to the defense item or services exported, this is called a *direct offset*. These are usually in the form of co-production, subcontracting, training, production, licensed production, or possibly technology transfer or financing activities, which are explained below. Conversely, an *indirect offset* is a form of compensation that is unrelated to the contracted defense item. The kinds of offsets associated with this type vary widely among purchases, investment, training, financing activities, marketing and exporting assistance, and technology transfer.

For the purpose of analysis, BXA divides offset transactions into nine different categories:

- Technology Transfer - Transfer of technology that occurs as a result of an offset agreement and that may take the form of research and development conducted abroad; technical assistance provided to the subsidiary or joint venture of overseas investment; or other activities under direct commercial arrangement between the U.S. manufacturer and a foreign entity.
- Subcontractor Production - Overseas production of a part or component of a U.S. origin defense article. The subcontract does not necessarily involve license of technical information and is usually a direct commercial arrangement between the U.S. manufacturer and a foreign producer.
- Co-production - Overseas production based upon government-to-government agreement that permits a foreign government(s) or producer(s) to acquire the technical information to manufacture all or part of a U.S. origin defense article. It includes government-to-government licensed production. It excludes licensed production based upon direct commercial arrangements by U.S. manufacturers.

---

- Licensed Production - Overseas production of a U.S. origin defense article based upon transfer of technical information under direct commercial arrangements between a U.S. manufacturer and a foreign government or producer.

- Purchases - Procurement of off-the-shelf items from the offset recipient. Often, but not always, purchases are indirect by nature. Indirect purchases are similar in definition to countertrade while direct purchases are analogous to buy-backs.

- Training - Generally includes training related to the production or maintenance of the exported defense item. Training may be required in unrelated areas, such as computer training, foreign language skills, or engineering capabilities.

- Investment - Investment arising from the offset agreement, taking the form of capital invested to establish or expand a subsidiary or joint venture in the foreign country.

- Marketing - Marketing assistance to foreign companies in either defense or unrelated industries. In some cases, countries require marketing in addition to the offsets. Also encompasses export assistance.

- Other - Any other form of offset required or offered by a defense company/foreign government.

### **1.23 Offset Example**

An example is the easiest way to understand what an offset is and to identify all of the agents involved in these agreements. This example is invented and in no way represents an actual offset agreement. The fictitious nation of Atlantis purchased ten KS-340 jet fighters from a U.S. defense firm, PJD Inc., for a total of \$500 million with 100 percent offset. The offset agreement obligated PJD to fulfill offsets equal to the value of the contract, \$500 million. The government of Atlantis decided what would be required of PJD in order to fulfill its offset obligation, which would include both direct and indirect compensation. The government also assigned the credit value for each category.

- Direct (related to the export item, the KS-340 jet fighter)

- Technology Transfer - The technology transfer requirement was assigned 36 percent of the total offset obligation. PJD agreed to transfer all the necessary technology and know-how to Atlantis firms in order to repair and maintain the jet fighters. The Atlantis government deemed this capability to be vital to national security and therefore gave a multiplier of six; the transfer of technology actually worth \$30 million was given the credit value equaled \$180 million.

- Co-production - Atlantis firms manufactured some components of the KS-340 jet fighters, totaling \$220 million – 44 percent of the obligation.

- Indirect (not related to the production of the KS-340 jet fighter)

- Purchase - PJD purchased marble statues from Atlantis manufacturers for eventual resale. This equaled 7 percent of the offset obligation, or \$35 million.

- Financing Activities - PJD made investments in non-defense related industries in Atlantis; this accounted for 4 percent of the offset obligation, or \$20 million.

---

- Technology Transfer - PJD provided submarine technology to Atlantis firms, which amounted to 6 percent of the offset obligation, or \$30 million.

- Marketing - Commercial assistance was provided for Atlantis fisheries to market their fish in the United States, which fulfilled the remaining 3 percent, or \$15 million, of the offset obligation. In this example, the Atlantis fisheries are *offset recipients*; they received marketing services for their product PJD hired an American advertising firm, the *offset fulfiller*, to market the Atlantis fish.

The offset agreement was for ten years with a three-year grace period. A timetable was created by the Atlantis government outlining which obligations should be fulfilled, to what extent, and when. If PJD did not meet the deadlines given, the company was required to pay the Atlantis government 5 percent liquidated damages. For example, if after ten years, only 98.5 percent of the offset obligation of \$500 million was fulfilled, PJD would be mandated to pay 5 percent of the 1.5 percent unfulfilled portion of the offset obligation equaling \$375,000.

### 1.3 Economics of Offsets

A basic analysis of offsets from an economic perspective is useful to determine the positive and negative impacts for both the purchasing and selling country or firm. When a government requires offsets, it directs labor and capital into industries that are deemed important and necessary instead of allowing the market to allocate inputs. This, in essence, subsidizes industries that receive benefits from offsets through government intervention. Countries with a small defense industry generally do not have sufficient sales volumes for either internal or external markets; therefore, they typically produce more expensive components than countries where firms are able to take advantage of economies of scale. These companies probably would not survive in a free market and therefore are being indirectly subsidized through offsets. Government attempts to allocate resources through offsets create and sustain these firms for national security, political, and employment reasons.

The implicit and explicit costs of offset agreements are often overlooked. The cost of fulfilling offset obligations can be substantial. Prime contractors also incur additional administrative expenses (added travel time, employee hours, insurance, legal and translation fees, etc.) due to prolonged negotiations. Also, additional employees with expertise in offsets often must be hired. For the duration of the offset contract, the prime contractor must monitor its fulfillment of its obligations in order to avoid penalties, adding additional costs. There can be many unforeseen costs that arise from any number of events associated with fulfilling offsets. Some of these costs are passed on to customers through increasing prices.

With indirect offsets, a defense company can be responsible for selling a product or providing services in which it has no expertise. For example, if marketing is a required offset, the defense company may hire a marketing firm, thus creating added costs. Firms operating outside their area of specialization incur additional costs, both for the prime contractor and the economy as a whole.

As discussed above, foreign governments direct offset benefits into areas that are believed to be nationally important; this may lead to emphasis on products that are not competitive. When foreign governments require offsets, they are creating inefficiencies for all involved, from the defense industry to the offset recipient. Moreover, defense companies are sometimes required to purchase from or market products for non-competitive companies. These inefficiencies result in higher prices for all industries involved and distort international trade patterns.

In addition to supporting unnecessary or non-competitive producers, when the foreign government dictates from whom the prime contractor must purchase or where to build

---

subcomponents, market participants are no longer basing their decisions on market factors, such as price and quality. In reality this does not affect the defense contractor to a large degree, because most of the additional costs are passed on to the purchaser. However, this obscures the market value of goods. In addition, there can be a significant impact on U.S. suppliers to the defense prime contractor who are displaced.

The problem of non-market decisions is more serious when looking at the factors foreign governments use in procurement strategies. Some governments readily admit that they are no longer concerned with the price or quality of the defense system purchased, but rather with the scope of the offset package offered. Recently, the Czech Republic announced that in competition for its jet fighter procurement, offsets would be the deciding factor as opposed to technical and performance criteria and price.<sup>7</sup>

## 2.0 Statistical Overview

This section provides a statistical overview of the data collected on new offset agreements and offset transactions from 1993 through 1998.

### 2.1 New Agreements

The offset agreement is separate from the sales contract and outlines what the defense prime contractor promises as an offset over a specified number of years. The “new” offset agreement often summarizes the type of offset required by the foreign government, any areas that receive multipliers, the percentage of direct and indirect fulfillment requirements, any penalties for non-fulfillment, and the procedures for receiving credits. These agreements usually are for 5-10 years and are signed between the purchasing government and the prime contractor. The goods/services to be provided or purchased by the prime contractor as the offset are generally not specified in the contract.

#### 2.11 1998 Data New Agreements

In 1998, U.S. prime defense contractors entered into 41 new offset agreements. The total defense export sales were valued at \$3.1 billion, with corresponding offsets equaling \$1.8 billion. Thus, the average offset required was 57.9 percent of the value of the sales item. U.S. prime defense contractors entered into these new agreements with 17 countries. This year, defense prime contractors signed a new agreement with a country not previously reported – New Zealand. Greece was the highest defense purchaser in 1998 and also had the highest value of offsets, with \$547.4 million in offset obligations. Canada had the highest offset obligation, with offsets totaling over 100 percent of the value of the defense sales. Denmark, Germany, the Netherlands, Norway, and Switzerland all required high levels of offsets, with 100 percent. The average time U.S. prime contractors were allowed to complete their offset obligations was 80 months (6.7 years), up six months from 1997. The time period ranged from one year to 15 years.

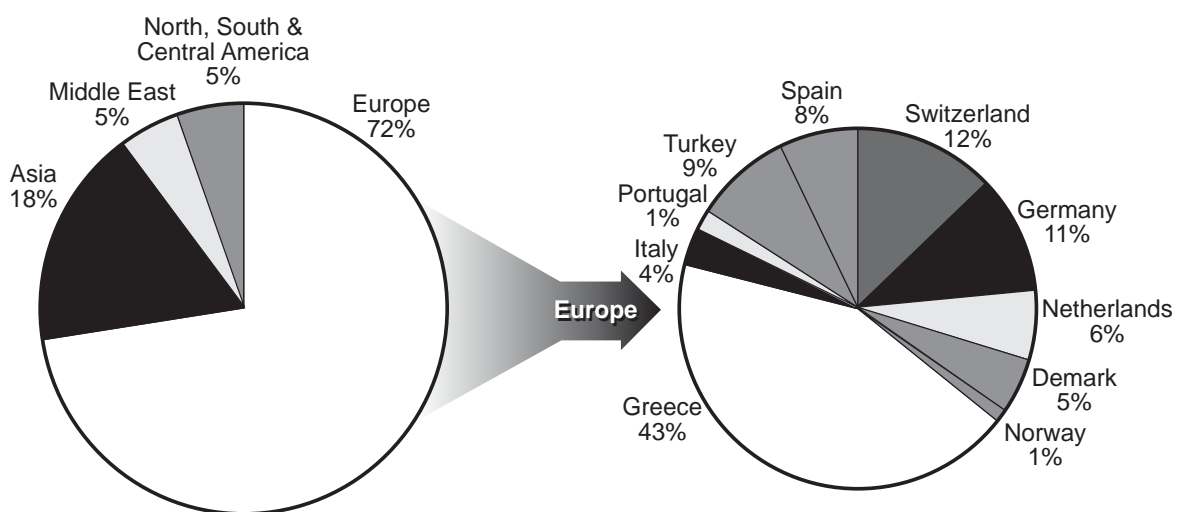
Europe dominated U.S. defense purchases and the total amount of offsets provided by U.S. prime contractors, as shown in **Chart 1**. In 1998 alone, new offset agreements in this region totaled \$1.3 billion; this was 72.3 percent of the value of all U.S. offsets. Asia, the second highest, comprised 17.9 percent, while the Middle East and the Americas were only 5 percent each. Even though Europe accounted for almost three-fourths of all offsets by value, the region entered into only half of the total associated defense contracts with the world. The average offset percent for Europe was 81.6 percent, up slightly from the previous year; this is 23.7 percent higher than the global average.

---

<sup>7</sup>Czech MIT Committee Reviews Fighter Offset Bids. *Countertrade & Offset*, Vol XVII, No. 22, 22 November 1999.

Of the 41 new agreements, 21 were concluded with Europe, half of which required more than 95 percent of the value of the defense item in offsets. Further, Australia (with overall average offsets of 28 percent) and Canada (with overall average offsets of 168 percent) were the only non-European countries with some new offset agreements in 1998 for 100 percent or more. See **Table 1** for a summary of new agreements data, comparing European nations with the rest of the world. It is clear from these data that the leading European economies continue to have the highest offset requirements in the world. The five nations with the highest requirements in the table below have among the highest per capita incomes in the world. And, with the exception of the Netherlands, the United States runs overall (defense and non-defense) trade deficits with each of the top five. Trade balance figures for 1998 are also included in **Table 1**.

**Chart 1**  
**The Regional Share of the Value New Offset Agreements in 1998**



Source: U.S. DOC/BXA Offset Database

**Table 1**  
**Average New Offset Agreements**  
**and U.S. Trade Balances - 1998**

<b>Country Receiving the Offset</b>	<b>Average Offset Percent Required</b>	<b>U.S. Trade Balance (U.S. Dollars in Millions)</b>
Switzerland	100%	\$-1,422.9
Germany	100%	-23,184.6
Netherlands	100%	11,378.4
Denmark	100%	-520.7
Norway	100%	-1,162.3
Greece	90%	888.5
Italy	70%	-11,968.2
Portugal	60%	-377.0
Spain	50%	673.4
<b>Overall</b>	<b>82%</b>	
<b>Non-European</b>		
Canada	168%	\$-16,652.6
Turkey	55%	962.8
Israel	39%	-1,657.1
S. Korea	35%	-7,456.3
Tawian	33%	-14,960.3
Kuwait	30%	\$258.1
Australia	28%	6,530.7
<b>Overall</b>	<b>37%</b>	

Source: U.S. DOC/BXA Offset Database

## 2.12 1993 to 1998 Data - New Agreements

From 1993 to 1998, U.S. prime contractors signed 279 new offset agreements totaling \$21 billion, which corresponded to \$38.5 billion in U.S. defense export sales. These new agreements averaged 54.5 percent of the value of the defense item. The average term for completing the offset agreements was 86.7 months, a little more than seven years. New offset agreements were concluded with 31 nations; agreements were also signed with NATO and the European participating governments (EPG), which includes Belgium, the Netherlands, and Norway. **Table 2** summarizes the new offset agreement activities for the six-year period.

**Table 2**  
**Distribution of New Offset Agreements by Year, 1993 to 1998**

<b>Year</b>	<b>Value of Defense Contracts</b>	<b>Value of Offset Agreements</b>	<b>Average Percent Offset Required</b>	<b>Average Duration of Agreement (in months)</b>	<b>Number of New Agreements</b>
1993	\$13,934,998,420	\$4,784,428,535	34.3%	84.71	28
1994	4,962,216,660	2,061,815,658	41.6%	92.19	50
1995	7,420,046,200	6,052,103,816	81.6%	92.13	46
1996	3,119,670,454	2,422,624,635	77.7%	93.35	53
1997	6,016,683,527	3,882,962,262	64.5%	77.86	61
1998	3,094,014,147	1,790,834,882	57.9%	80.03	41
<b>Total</b>	<b>\$38,547,629,408</b>	<b>\$20,994,769,788</b>	<b>54.5%</b>	<b>86.71</b>	<b>279</b>

Source: U.S. DOC/BXA Offset Database

As shown in **Table 2**, offset percentages vary because of the cyclical nature of defense purchases (and related agreements), and the percentages demanded also vary by region. However, as shown in **Chart 4**, offset percentages have been steadily increasing since 1980.

**Chart 2** shows the distribution of the largest offset obligations by country or region. Approximately 72 percent, or \$27.8 billion, of the value of new offset agreements was attributed to European nations; the United Kingdom alone was responsible for 23 percent. Following the United Kingdom are the Netherlands and Switzerland with 9 percent each. Most European nations require at least 100 percent offsets on defense procurements while non-European nations make actual offset burdens more manageable through the use of multipliers or smaller offset requirements.

Other countries with a significant percentage of the new offset agreements were Taiwan with 8 percent; and Saudi Arabia and Italy with 7 percent each. Some of these countries had only a few large offset agreements, while others had more than twenty agreements.

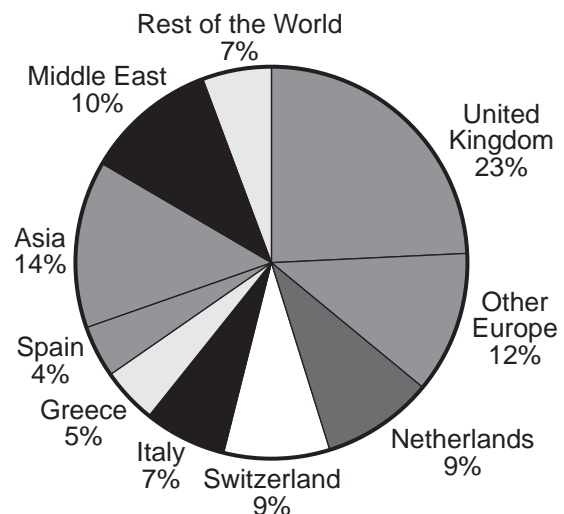
Almost one half of all new agreements required 100 percent or more in offsets. Europe constituted the majority of offset agreements that were greater than 100 percent. The United Kingdom accounted for 44 percent of all offset agreements over 100 percent in Europe. Of the offset agreements that were above 100 percent, Greece, the Netherlands, Norway, Sweden, and Turkey averaged approximately 115 percent or more. The Netherlands was almost 125 percent. Brazil, Canada, and South Korea were the only other non-European nations to require more than 100 percent in offsets.

As shown in **Chart 3**, the average time U.S. prime contractors were allowed to complete their offset obligations was 87 months (7.25 years). The time period for fulfillment ranged from one to 15 years.

### 2.13 Long-Term Trends

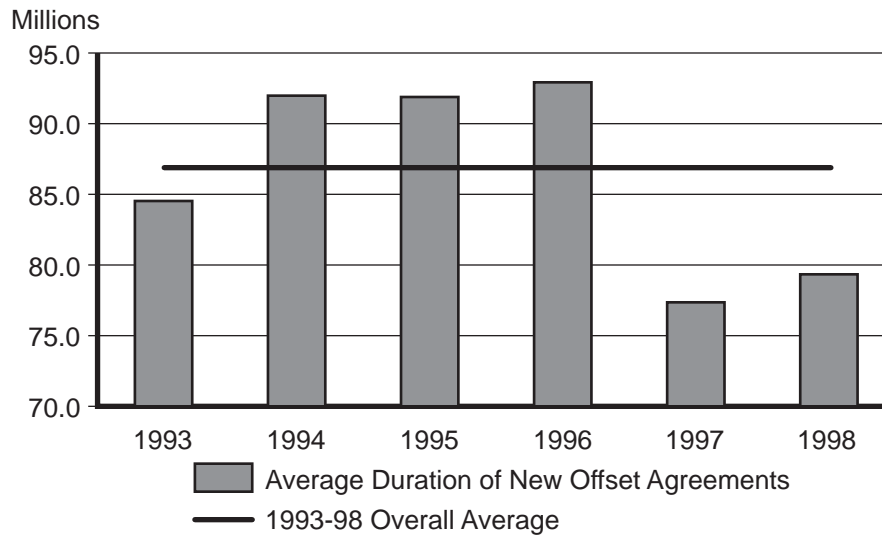
In order to ascertain long-term trends, **Chart 4** combines data collected by the Office of Management and Budget from 1980 through 1987 with BXA data for 1993 through 1998 to show a long-term trend in offset requirements. No data was collected from 1988 to 1992. While it appears from the offset percent line that offset percentages overall are varying widely, the trend, as shown by the log of the offset percent, is gradually increasing. There is a cyclical pattern in the data, with increases in defense exports, and therefore offsets, corresponding to major military conflicts around the world. While this is a useful examination, it is important to note that there are differences in the methods used by each agency to collect data.

**Chart 2**  
**New Agreements, 1993 to 1998**



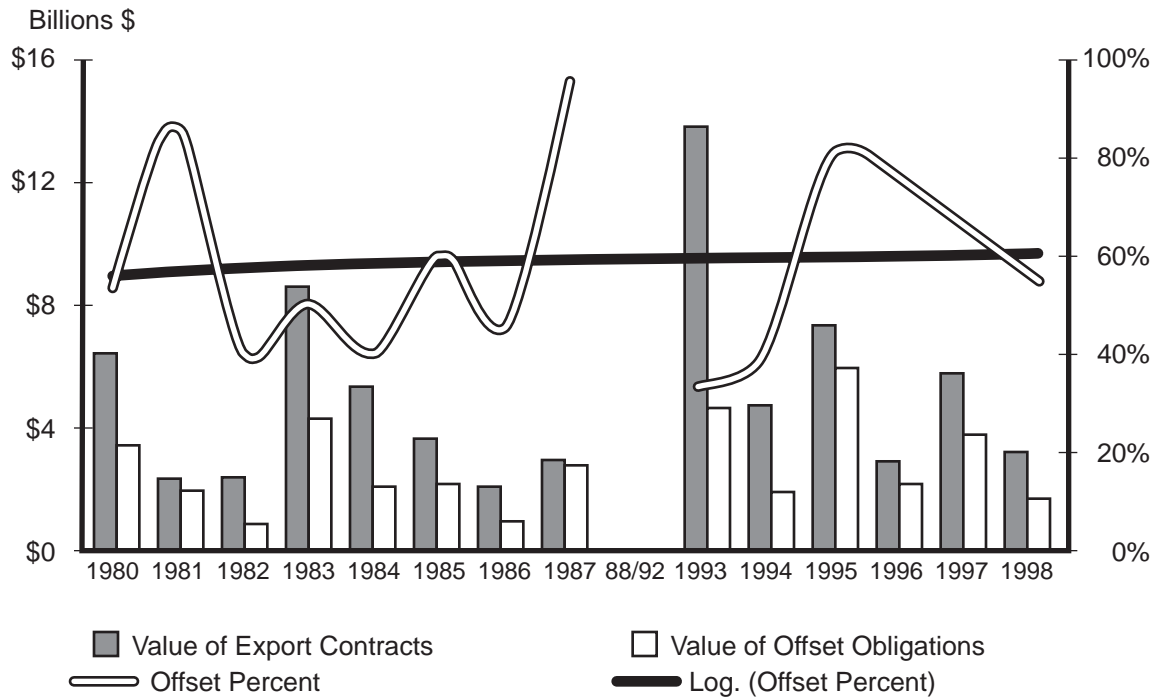
Source: U.S. DOC/BXA Offset Database

**Chart 3**  
**Average Duration of New Offset Agreements, 1993 to 1998**



Source: U.S. DOC/BXA Offset Database

**Chart 4**  
**Trend of New Offset Agreements, 1980 to 1998**



Source: U.S. DOC/BXA Offset Database

---

## 2.2 Offset Transactions

Offset transactions are the means by which defense firms obtain credits to fulfill the terms of an offset agreement. These transfers of goods or services are categorized into nine areas, as defined in Section 1.2. The foreign government has the ultimate authority as to which offset credits are deemed acceptable. For example, the Netherlands offset authority denies credit for almost 40 percent of all completed offset transactions submitted.<sup>8</sup>

The foreign government may assist the U.S. defense contractor in choosing a local company to benefit from the offset. Benefits are usually directed to specific industries deemed important by the government or to areas that will boost economic growth. The latter may include projects such as infrastructure improvements – roadways, telephones, electricity, etc. If the offset transactions are not in the area of expertise of the defense company, the U.S. company will often hire a third party, the offset fulfiller, to provide or purchase the specified goods or services. The third party may be located anywhere in the world.

Certain countries allow defense contractors to enter into *pre-offset* transactions. This means the defense firm provides offsets not associated with a specific defense system or offset contract. These pre-offset transactions may be required in order to win new sales. If the defense company does not win the sale, these credits may be banked for future contracts or traded, or, in some cases, the company may forfeit the credits and therefore all investments associated with the pre-offset transactions. The BXA has been unable to determine whether companies report these transactions when eventually applied toward an obligation.

### 2.21 1998 Offset Transaction Data

In 1998, 17 U.S. defense firms reported \$2.28 billion in offset transactions with 29 different countries and one group of nations. The value of these transactions declined 18.7 percent from 1997 and received offset credit equaling \$2.6 billion, or 114 percent of their actual value. The top three U.S. defense companies providing offsets accounted for 85.6 percent of the value of all reported transactions. Europe was by far the largest offset recipient, with more than 80 percent of all offsets, followed by Asia with only 9 percent. As in previous years, the United Kingdom is the largest offset recipient, receiving 26.2 percent of the value all European transactions and 21.4 percent of all transactions. Following the United Kingdom was Italy with 22.3 percent and 18.2 percent respectively, while Finland received 11.3 percent and 9.2 percent. **Table 4** represents the dollar values of the percentages.

**Table 4**  
**1998 Actual Value of Offset Transactions for the Top Seven Countries**

Country	Actual Value of the Offset
United Kingdom	\$487,345,790
Italy	414,517,732
Finland	209,319,336
Switzerland	156,265,139
Netherlands	153,821,677
Israel	140,042,316
Germany	105,957,507

Source: U.S. DOC/BXA Offset Database

---

<sup>8</sup>Defense Industry Offsets Association Annual Meeting, 2000.

Industry and government debate whether or not foreign governments are demanding more indirect offsets. While past offset data showed that much of the increase in offset activity was derived from growth in indirect transactions with slight increases in direct offsets, for 1998 the data changed dramatically. In 1998, direct offsets totaled \$1.43 billion, 62.6 percent of the value of all offsets; this is a 39 percent increase from 1997. This significant rise can be explained by two large transactions that totaled more than \$470 million. Indirect offsets constituted the remaining activity, equaling \$850 million. As mentioned before, direct and indirect offset transaction statistics vary from year to year, depending on the purchasing nation and its offset policy.

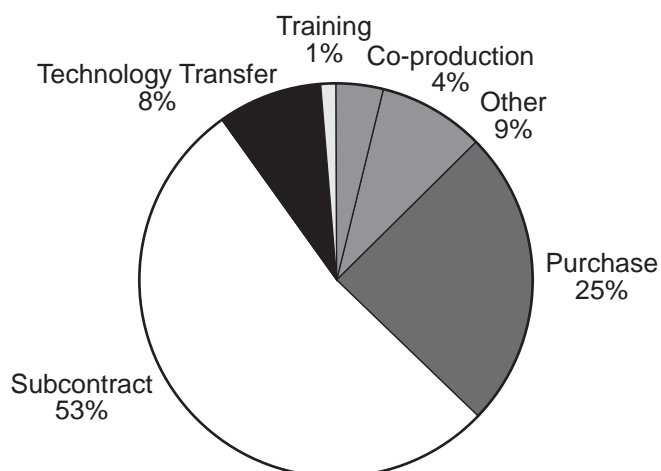
### 1998 Offset Transactions by Category

**Chart 5** depicts 1998 offset transactions by category. Direct offsets tend to be subcontracts, coproduction or licensed production. Subcontracts made up more than half of the value of the offsets. A quarter of the transactions were purchases, which are generally associated with indirect offsets. Approximately 8 percent of the transactions were technology transfers; these can be either directly or indirectly related to the exported defense item.

### 2.22 1993 to 1998 Offset Transaction Data

As stated in the previous section, the 1998 transaction totals are an anomaly compared to the previous years, as direct offsets increased while overall fulfillments decreased. Offset transactions totaled \$14.1 billion in actual value from 1993 to 1998. U.S. companies completed 3,432 transactions with 33 countries, NATO and the EPG.

**Chart 5**  
**1998 Offsets by Category**



Source: U.S. DOC/BXA Offset Database

### Offset Transactions by Country

**Table 5** ranks the top fifteen countries that received offsets transactions from 1993 to 1998. Three countries alone received \$8.2 billion in offsets, which accounted for 58 percent of the total value of all transactions. In contrast to new agreement data, Finland, not the United Kingdom, was the largest offset transaction recipient with over \$2.8 billion. This is in part because of a \$3 billion F/A-18 sale in 1993, which predates the BXA new offset agreements database. Otherwise, the United Kingdom, with \$2.3 billion in offset transactions, would be the largest recipient. Israel, a country that receives U.S. Foreign Military Funding (FMF), is third with \$1.1 billion. This unique relationship, where Israel receives aid to purchase U.S. defense equipment and then requires offsets of U.S. companies, is discussed in detail in Section 3.22.

**Table 5**  
**Top 15 Offset Receiving Countries, 1993-1998**

<b>Country</b>	<b>Total Value of Offset Transactions</b>	<b>Total Credit Value Awarded</b>
Finland	\$2,841,871,720	\$3,055,539,227
United Kingdom	2,304,668,346	2,325,444,232
Israel	1,119,243,485	1,175,855,823
Switzerland	997,642,368	1,002,737,749
Netherlands	920,900,179	1,199,259,359
South Korea	755,398,266	1,048,795,766
Spain	591,558,212	765,357,153
Turkey	582,611,073	618,415,554
Italy	528,869,332	528,869,332
Germany	515,665,208	515,665,208
Australia	433,608,945	457,763,945
Canada	405,740,905	410,165,555
Greece	357,881,677	553,476,527
Taiwan	312,791,603	835,396,483
Malaysia	256,557,399	291,257,399

Source: U.S. DOC/BXA Offset Database

More than a thousand foreign companies and government agencies received offset transactions from U.S. firms. The top nine recipient companies received more than \$2 billion in transactions over the six-year period, as shown in **Table 6**, which equals more than 15 percent of the actual value of all offsets transactions. The largest company continues to be Valmet, a Finnish company, who received \$458 million in offsets. A new addition, Elmer, an Italian firm, received \$370 million and joined the group of leading recipients for the first time. The top six foreign government agencies received a little less than 8 percent of all transactions. The Israeli offset agency, Industrial Cooperation Authority (ICA), was the largest government agency recipient, with \$409 million.

### **2.221 Multipliers**

The \$14.1 billion in transactions received \$16.6 billion in offset credits; this is 118 percent of the actual value. So, U.S. defense firms are receiving an average multiplier of 1.18. This is quite low in comparison to what many official offset policies promulgate as possible (see **Appendix E**, starting on page 104 in this Journal, for an overview of countries' offset policies). Most industrializing countries offer higher multipliers, an average of 1.37, which is 20 percent higher than the industrialized nations. However, industrializing nations constituted only 15 percent of the value of all offsets, so the higher multipliers rarely relieve U.S. prime contractors. The United Kingdom, Switzerland and Canada, countries who received 26 percent of the value of all offset transactions, do not even allow multipliers and require 100 percent offsets on all defense procurements. Industrializing nations, such as Taiwan, Malaysia, South Korea and Greece, gave an average multiplier of 1.69; yet, as shown in **Table 5**, they accounted for only 12 percent of the value of all offset transactions.

**Table 6**  
**Top Offset Transaction Recipients,**  
**Private and Government, 1993 to 1998**

Recipient	Country	Total Value of Offsets
<b>Industry</b>		
Valmet	Finland	\$458,105,526
Elmer	Italy	370,171,078
Fokker	Netherlands	257,830,539
Kvaerner Masa-Yards	Finland	208,134,000
Samsung	South Korea	204,628,741
Sitra	Finland	201,600,000
GEC Marconi	United Kingdom	184,531,418
Reflectone	United Kingdom	141,409,000
Smiths	United Kingdom	131,245,847
<b>Government</b>		
Industrial Cooperation Authority	Israel	408,883,000
Air Force	Turkey	167,738,000
Navy	Greece	141,584,000
Ministry of Defense	South Korea	130,221,996
Ministry of Economic Affairs	Netherlands	102,394,000
Ministry of National Defense	Turkey	116,094,825

Source: U.S. DOC/BXA Offset Database

### 2.222 Offset Type: Indirect vs. Direct Offsets

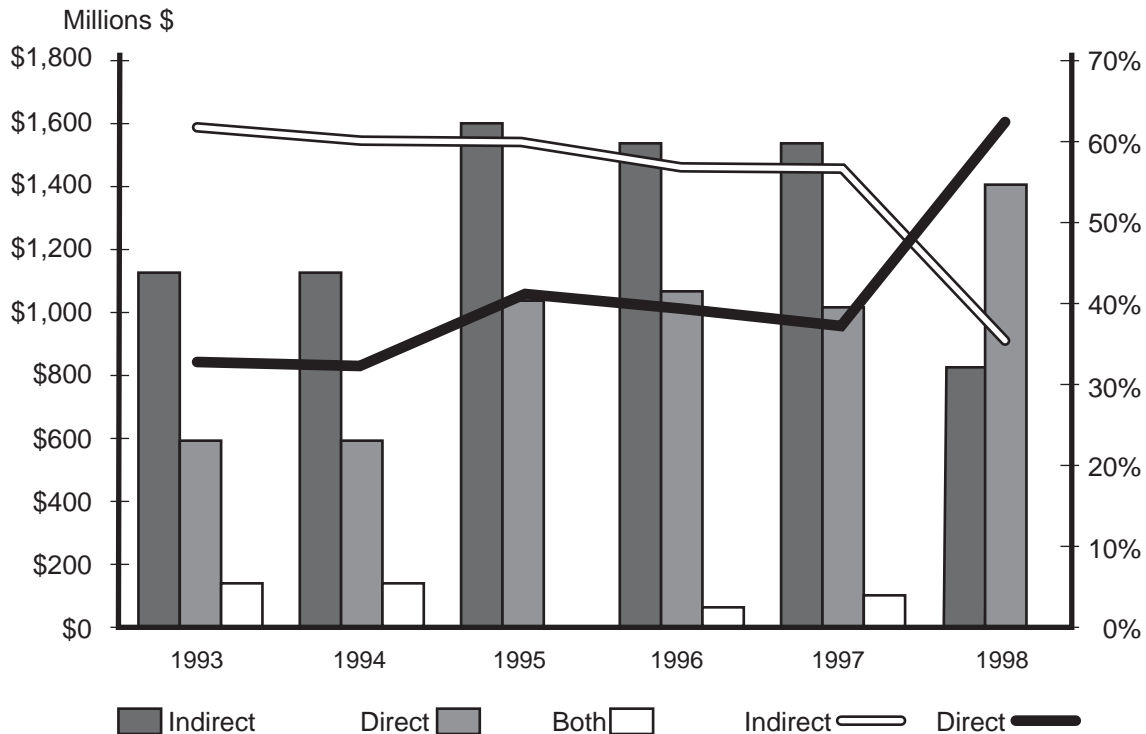
As discussed in the Section 2.21, the distribution of 1998 offset transactions between direct and indirect is an anomaly. Anecdotal evidence suggests that offsets are becoming more indirect while the data (**Chart 6**) show direct offsets are actually increasing. The notion that indirects are rising stems from recent changes in offset policies. For example, in 2000, South Korea switched its offsets focus from directly related technology to any offset that would increase employment levels, thus opening the door for more indirect offsets. These modifications in official offset guidelines are not yet reflected in the data, as there is a lag between the codification changes and industry reporting.

Indirect offsets were the largest type for the period, totaling \$7.8 billion or 55 percent of the actual value of all transactions. Meanwhile, direct offsets were \$5.8 billion or 41 percent of the total. The remaining \$500 million offsets were either unspecified or both direct and indirect. Since there was a large increase in direct offsets and decline in indirects, 1998 data significantly increased the overall direct percentage. It is difficult to hypothesize whether or not this trend will continue. However, with the recent shift in offset guidelines, and given that most of the change in 1998 resulted from a few large transactions, it is highly unlikely.

### 2.223 Offset Transactions By Category

**Chart 7** breaks down offset transaction activity by category for 1993 to 1998. The majority of offset transactions, 66 percent of the value, are categorized as either purchases (generally indirect offsets) equaling \$5.1 billion or subcontracts (generally direct offsets) totaling \$4.1 billion. Technology and credit transfers worth \$1.6 billion and \$1 billion respectively constitute a majority of the remaining offsets.

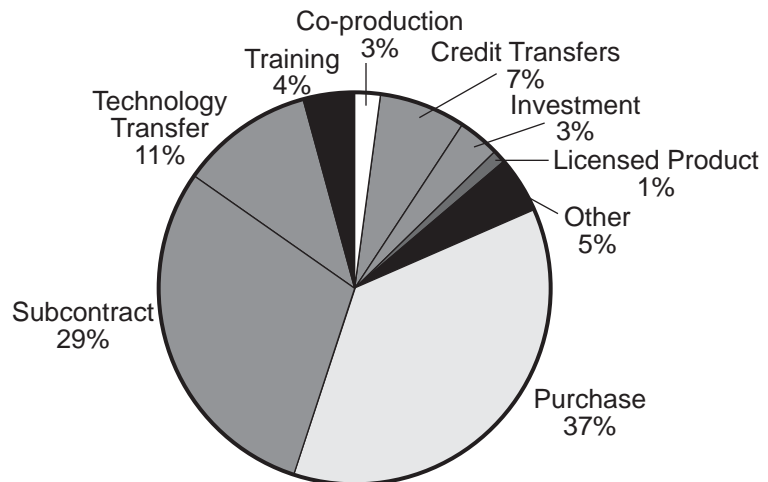
**Chart 6**  
**1993-1998 Offset Transactions: Direct and Indirect**



Source: U.S. DOC/BXA Offset Database

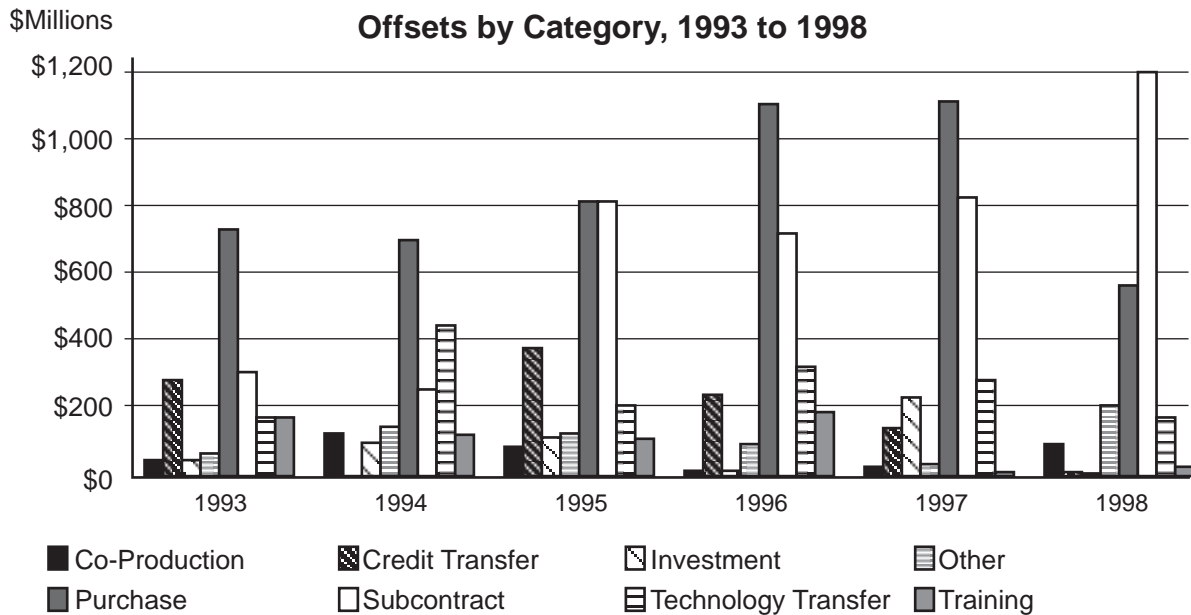
Both purchases and subcontracts increased overall during the six-year period, as seen in **Chart 8**, although purchases fell in 1998 in line with other indirect offsets. Since 1995, investments, credit transfers, and technology transfers have steadily declined as a form of offset while the unclassifiable (other) category has increased. The various means to fulfill offset requirements are increasingly complex, making it difficult to categorize offset activities. This might account for the increase in unclassifiable offset activity and the subsequent decline in the previously mentioned categories. Training, which remained relatively constant for the first four years declined dramatically in 1997 and 1998. The overall trend shows a movement away from investments, credit transfers, and technology transfers, which allowed for higher markup for the prime contractors, toward purchases and subcontracts, more tangible offsets which have more of a direct effect in displacing U.S. subcontractors.

**Chart 7**  
**1993 to 1998 Total Transactions by Category**



Source: U.S. DOC/BXA Offset Database

Chart 8



Source: U.S. DOC/BXA Offset Database

The distribution of the type of offset, direct vs. indirect, differs from category to category. **Table 7** breaks down each offset category by type. As shown, investments, credit transfers and unspecified are usually indirectly related to the defense item sold while training is typically direct. Technology transfers are fairly evenly distributed between both types with a propensity towards indirect.

The makeup of these offsets by type, direct vs. indirect, within each category has changed remarkably over the past six years. Since 1995, there have not been any direct credit transfers, and indirect credit transfers have steadily declined. Indirect investments, on the other hand, rose rapidly from 1993. There was only one year, 1994, with a directly related investment. Direct licensed production has remained relatively constant over the years with only one year of indirects in 1994. Excluding 1998, direct technology transfers have risen from \$65 million in 1993 to \$160 million 1997; in 1998, there was a sharp decline to \$60 million. From 1993 to 1995, indirect technology transfers increased from \$79 million to \$93 million and have hovered at around \$130 million since. Training in both types has consistently declined over the six-year period. Finally, unspecified offsets in both types have steadily increased from 1993 to 1998; indirects grew from \$48 million to \$115 million, and direct moved from \$10 million to \$79 million.

**Table 9** shows all offsets by main industry group at the two-digit standard industrial classification (SIC) code level for 1993-1998. As in previous years, transportation equipment was the largest industry group of offset activity, with approximately 34 percent of the value of all transactions. This is to be expected as 41 percent of all offsets were directly related to the defense item sold, which are generally aerospace-related and usually categorized in this group. The next largest group was a distant second with only 9 percent of all offsets, electronic and other electric equipment. Following closely behind electronic equipment was industrial machinery and equipment, which accounted for 6 percent of the value of all offset transactions.

**Table 7**  
**Offset Category by Type, 1993 to 1998**

<b>Offset Category</b>	<b>Offset Type</b>	<b>Actual Value of Offset</b>
Investment	Direct	\$3,850,000
	Indirect	412,103,500
	Unspecified	73,743,000
Credit Transfers	Direct	\$4,004,427
	Indirect	1,044,810,630
Technology Transfer	Direct	\$688,396,422
	Indirect	827,873,323
	Unspecified	90,733,540
Training	Direct	\$401,016,129
	Indirect	189,002,727
	Unspecified	1,863,000
Unspecified	Direct	\$147,775,480
	Indirect	490,342,776
	Unspecified	1,188,000

Source: U.S. DOC/BXA Offset Database

There are some interesting trends and changes in the make-up by type, direct vs. indirect, of the top three industrial groups. The value of direct transactions in aircraft equipment has consistently risen from 33 percent of all related transactions in 1993 to 80 percent in 1998. Overall, direct transactions account for 55 percent of the value of all transactions in this category, while indirect are 40 percent and unspecified comprising the remainder. Direct offsets comprised 64 percent of the value of all transactions in the electric equipment category, while indirects accounted for the remaining portion. In 1995 and 1996, offsets in this industry group were evenly distributed by type. In 1997, however, direct offsets increased dramatically, causing direct to be dominant; this pattern continued in 1998 as well. Finally, 90 percent of all industrial equipment transactions were directly related to the sales item. Except for 1996, direct offsets have consistently been the largest portion in this industry group.

In the top three industry groups, due to the direct nature of these categories, it is expected that the majority are directly related to the defense item. For some main industry groups, offsets are primarily indirect. For example, business services was mainly indirect, totaling 78 percent of the value, with direct accounting for 23 percent over the six-year period. However, direct offsets in this group have been consistently increasing. In non-depository institutions, 99 percent of the value of transactions is indirect from 1993 to 1998.

Over 11 percent of the value of all offset transactions, \$1.5 billion, were related to the sale of aircraft engines. These offsets were split evenly among direct, indirect and unspecified. Most, 66 percent of these transactions, were classified as transportation equipment. The next industry group was fabricated metal products, which made up 9 percent. Engineering, accounting, research, management and related services followed with only 5 percent.

**Table 9**  
**Offsets Provided by Main SIC Code, 1993-1998**

<b>Main Category</b>	<b>Total Actual Value of Offsets</b>
37 Transportation Equipment	\$6,735,249,792
36 Electronic & Other Electronic Equipment	1,793,039,687
35 Industrial Machinery & Equipment	1,181,969,976
73 Business Services	688,532,783
38 Instruments & Related Products	649,891,002
61 Non-depository Institutions	541,163,725
87 Engineering & Management Services	535,542,346
34 Fabricated Metal Products	439,765,709
67 Holding & Other Investment Offices	309,072,900
82 Educational Services	233,697,427
50 Wholesale Trade, Durable Goods	229,644,109
Not Classified	170,206,525
28 Chemicals & Allied Products	91,524,171
33 Primary Metal Industries	76,317,926
89 Services (Not Included Elsewhere)	65,735,818
48 Communications	50,003,000
07 Agricultural Services	39,228,000
97 National Security & International Affairs	32,300,000
15 General building Contractors	29,992,359
27 Printing & Publishing	29,403,008
26 Paper & Allied Products	21,089,000
20 Food & Kindred Products	15,466,000
13 Oil & Gas Extraction	12,178,000
45 Transportation By Air	11,360,300
32 Stone, Clay & Glass Products	11,344,000
55 Automotive Dealers & Service Stations	10,346,814
22 Textile Mill Products	6,362,020
76 Miscellaneous Repair Services	6,111,623
44 Water Transportation	5,208,237
39 Miscellaneous Manufacturing Industries	5,100,000
30 Rubber & Miscellaneous Plastics Products	4,310,302
17 Special Trade Contractors	3,874,000
23 Apparel & Other Textile Products	3,813,418
16 Heavy Construction (Except Building)	3,510,167
47 Transportation Services	3,474,921
51 Wholesale Trade, Non-durable Goods	3,065,665
14 Nonmetallic Minerals Mining (Except Fuels)	2,727,536
42 Trucking & Warehousing	1,451,000
57 Furniture & Home Furnishing Stores	1,324,046
62 Security & Commodity Brokers	1,302,000
49 Electric, Gas, & Sanitary Services	1,085,200
53 General Merchandise Stores	835,629
95 Environmental Quality & Housing Administration	635,000
81 Legal Services	75,000
80 Health Services	28,000
79 Amusement & Recreation Services	22,336
41 Local & Interurban Passenger Transit	11,488
<b>Grand Total</b>	<b>\$14,058,391,965</b>

Source: U.S. DOC/BXA Offset Database

---

### 3.0 Offsets in Developed vs. Developing Nations

This chapter provides examples of offset policies for developed and developing countries. U.S. companies provided \$2 billion in offset activities to industrializing countries over the six-year period analyzed, and about \$12 billion to industrialized countries for the same period. For industrializing countries, indirect offsets were the most commonly provided offset, equaling 63 percent, while direct was 36 percent, and unspecified 1 percent. In contrast, industrialized nations require more direct offsets, 42 percent, while indirect constituted 54 percent and unspecified 4 percent.

#### 3.1 Developing Nations and Indirect Offsets

Developing nations use defense purchases and related offsets to provide for security needs as well as much needed infrastructure projects. Developing nations usually operate under budget constraints, and offsets seem to be a good solution to this problem. (This form of indirect offsets is productive only when governments and prime contractors work closely together to effectively and efficiently utilize resources.)

#### 3.11 Czech Republic: The Development of an Offset Policy

The fall of the Berlin Wall has brought new opportunities for the Czech Republic and specifically its national defense industry. Despite a difficult period of transition in Czech industry, industry observers feel the Czech military industry is ready to expand. After seeing its military sales figures and employment levels steadily decrease for much of the last decade, Czech officials hope to recapture the nation's tradition of military manufacturing.<sup>9</sup>

Although NATO officials have recommended the Czech Republic focus more on recruiting and training its military personnel, Czech Republic officials are anxious to begin acquiring advanced weaponry. In May 2000, *Defense News* quoted an official from the Czech Foreign Ministry as saying it is the goal of the Czech Republic to be "a real ally and not a free-rider."<sup>10</sup> Therefore, there are new opportunities for Western aerospace contractors looking to establish themselves in the Czech market. The Czech Republic sees this stage of development as a time to maximize the financial benefits of its future purchases by instituting its own offset policy.

Recognizing its leading role as one of the most advanced economies in Central Europe and its important status in the international market for defense items, the Czech Republic formalized an offsets policy in 2000. The policy aims to increase levels of foreign investment in the Czech Republic, especially in civil sectors of society such as high technology and science. In 1998, the drafters of the legislation indicated that they also view offsets as a way to acquire new technology, increase employment opportunities for Czech Republic citizens, enhance sustainable economic development, and effectively further "the economic interests of the Czech Republic."<sup>11</sup>

The Czech government was able to draw from the offset experiences of other European nations while formalizing their own rules for offsets. The Ministry of Trade and Industry (MTI) consulted with government officials from European allies, such as Great Britain, France, Finland, and Denmark, and held several conferences on the utility of offsets for the Czech Republic with representatives from both private industry and the government. In May 2000, one Czech official

---

<sup>9</sup>Green, Peter S. "Where the Armorers No Longer Thrive." *The New York Times*, Sunday, April 2, 2000.

<sup>10</sup>Hill, Luke, "Czech Fighter Decision Taxes to Runway," *Defense News*, May 8, 2000.

<sup>11</sup>Czech Republic, Ministry of Industry and Trade; Ref. 311147/98/6110/1000, PID: MIPOX005WHYE, Order No. 26/98 of the Ministry of Industry and Trade on implementation of offset programmes; December 1, 1998.

---

noted that when Finland recently negotiated a deal for F/A-18s, it required 150 percent in offsets. The official said the example “is a good one” for what the Czech Republic hopes to achieve.<sup>12</sup>

The decision to codify its policy on offsets coincided with the Czech Republic’s announcement of its plan to devote \$2 billion for the purchase of new fighter aircraft to replace its fleet of Russian MiGs. Since as early as March 1999, Czech Republic government officials have stated that offsets will be the main criteria for deciding which fighter aircraft they purchase. Because Czech officials view the technical parameters of the fighter jets being offered as so similar, offset packages will outweigh technical factors and price when making a final decision.

Realizing this new opportunity for sales, the Czech Republic has been inundated with offers from major international aerospace contractors. The companies vying to conclude deals with the Czech government include Boeing with its F/A-18, Lockheed Martin with its F-16, British Aerospace-Saab with the JAS-39 Gripen and Dassault Aviation with its Mirage 2005. In addition to presenting their product, each firm is constructing offset packages (each of which will be at least 100 percent) and starting to create a niche for itself in the Czech economy.<sup>13</sup>

Boeing bought 34 percent of Aero Vodochody, a Czech firm, as a pre-offset and won a contract to supply 737s to Czech Airlines. It was valued at \$33 million and resulted in a deal between Boeing and Czech Airlines. Boeing’s subsidiary, Ayers, also bought LET Kunovice, a major producer of commuter planes. Ayers plans to move part of the production line for its own planes to LET. Lockheed Martin’s pre-offset activities included a technology transfer program with Skoda Elcar, a Czech manufacturer of transportation equipment. Saab and British Aerospace have also started to make pre-offset arrangements with the Czech government.<sup>14</sup>

### 3.12 United Arab Emirates: The Use of Offsets

The United Arab Emirates (U.A.E.) has developed an extensive offset policy aimed at developing its economy. The U.A.E. Offsets Group (U.O.G.) administers the program and seeks suppliers who show a commitment to the growth of the U.A.E., not just to the procurement or the offset agreement. In this sense, the U.A.E. offset program is a prime example of a developing country using defense procurements to benefit other aspects of its economy. As Dr. Amin Badr-El-Din comments in a U.O.G. brochure,

*The aim of our offset program is to enhance security by leveraging off our defense procurements to fulfill both our military and economic goals simultaneously . . . The U.A.E. offset program is designed to generate wealth among the people of the U.A.E. and assist with the global integration of its economy by the creation of commercially viable ventures through partnerships and strategic alliances between the domestic private sector and international business.*<sup>15</sup>

Offsets are required on all U.A.E. armed forces procurements over \$10 million. Offsets must be a minimum of 60 percent of the imported content of the defense item. Pre-offset credits may help a prime contractor win an award; the credits may later be traded or banked for future obligations. Prime contractors may choose to fulfill offset obligations in any industry except oil. Credit is awarded based on the profits of the projects undertaken in the offset program. Since the

---

<sup>12</sup>Hill

<sup>13</sup>*Offset Requirements of Major Arms Importers – Additional Information*; “Czech Republic”, <http://area51.upsu.plym.ac.uk/dgadd/offsets/offreqag.html>.

<sup>14</sup>*Countertrade & Offset*, Vol, XVII, No. 10, May 24, 1999.

<sup>15</sup>“Partnerships for a Better Future” Brochure, U.A.E. Offsets Group.

---

U.O.G. strives to increase its gross domestic product (GDP) per capita, credits will not be awarded for projects that are labor intensive.

Between 1993 and 1998, U.S. defense prime contractors signed \$180 million in new offset agreements in connection with \$325 million in export sales, for an average of 55 percent required offsets. During this same time period, U.S. primes fulfilled part of these and previous agreements with \$65 million worth of transactions, receiving \$206 million worth of credits. These credits average a multiplier of 3.2.

The U.O.G. has been quite creative in generating new ways to fulfill offsets and help the economy. For example, offsets were used to manage Ghantoot, a world-class polo and racing facility that stages annual international events.<sup>16</sup> The U.O.G. encourages foreign offset partners to launch initial public offerings (IPOs) for all of their joint venture projects. Not only do the IPOs raise money for the projects, but they also increase profits. In 1998, a new joint venture company called International Fish Farming Company was created for offset credits, in which Dassault and other foreign partners provided 45 percent of the capital investment and 55 percent came from public and IPO funding. Recently, Boeing joined Berlitz International, Inc. and local investors to fulfill an offset obligation by establishing a Berlitz Language Center in Abu Dhabi.<sup>17</sup>

In early 2000, the United States approved the sale of 80 F-16s to the U.A.E.. The radar equipment on the U.A.E. fighters will be technologically superior to any other F-16s made to date, including those used by the U.S. military. With the nature of the U.A.E. offset program and its requirement for partnerships, the U.A.E. is paying for the majority of the research and development for the new technology.

### **3.2 Industrialized Nations and Direct Offsets**

Industrialized countries in Europe originally received offsets from the United States after World War II. These offsets were mainly direct to help these countries rebuild their defense industries. Indirect offsets provided at this time were also focused on rebuilding, consisting mainly of infrastructure projects and public works very similar to those that developing countries now receive.

In recent years, however, European nations have less justification for demanding direct or indirect offsets. Their economies are among the most developed in the world. The United States is now subsidizing strong industrialized countries in their efforts to further enhance existing competitive industries. Further, many European countries use offsets to make up for their lack of spending on defense and related research and development.

#### **3.21 Finland: The Work of Indirect Offsets**

Finland is a prime example of an industrialized country that receives large amounts of indirect offsets. Finland requires 100 percent offsets on any defense procurement over FIM 50 million (about \$7.4 million). Based on offset policy changes initiated by the Finnish Ministry of Trade, which took effect in 1998, the current Finnish offset policy focuses on indirect offsets.

The highly publicized sale in 1993 by McDonnell Douglas (now Boeing) of F/A-18s resulted in \$3 billion in offset obligations.<sup>18</sup> By reviewing income and employment data for several of

---

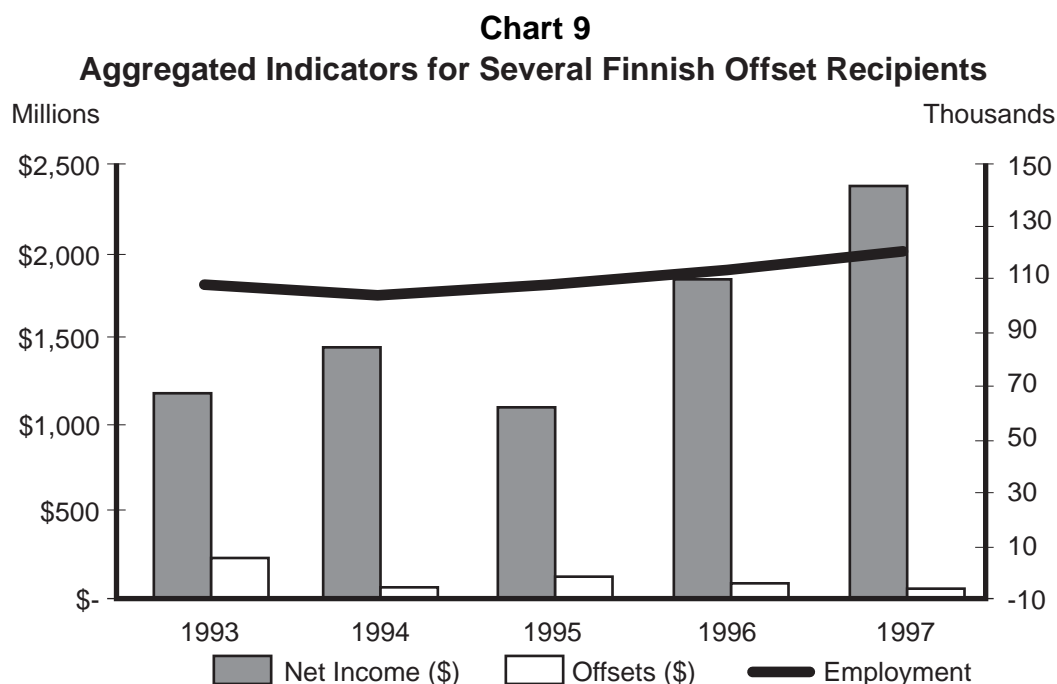
<sup>16</sup>*Ibid.*

<sup>17</sup>*Countertrade & Offset*, Vol. XVII, No. 12; June 26, 2000. CTO Data Services Co.

<sup>18</sup>The International Association of Machinists and Aerospace Workers, 1997. <http://www.iamaw.org/news/journal/spring97/defensefirms.html>.

the largest Finnish companies that also received offsets, it is likely that offsets probably aided these companies' growth (**Chart 9**).<sup>19</sup>

To assess the impact of offsets on Finnish offset recipient companies, it was necessary to define a small group of firms receiving a relatively large portion of the total offset amount. Then, a list of Finland's 500 largest companies was compared against the list of Finnish offset recipients; those industrial participation recipients that appeared among the top 150 private companies were selected for further examination.<sup>20</sup> A narrower group was selected based on percentage of offset agreements received, ranking in the Finnish industry, and the type of offset received.



Source: U.S. DOC/BXA Offset Database

The Finnish recipients studied seem to have benefited from the offsets. After a large surge in offsets in 1993, the aggregated net income of the companies gradually increased, ending 10 percent higher in 1998 than in 1993. As the benefits of offsets are not immediate, it is to be expected that the net incomes rose significantly only in 1996 and 1997. Of course, offsets are not the only reason for an increase in net income, but are undoubtedly a factor. With these rises in net income, employment also increased by 13 percent; these numbers may have also increased due to an upswing in the overall European economy.

The companies studied represented 30 percent of all offsets received by Finnish companies from U.S. defense primes from 1993 to 1998. Exactly half of these offsets were direct and half were indirect, although the direct offsets were much fewer and larger in value. The majority of

<sup>19</sup>1999 employment data: <http://www.wow.fi/WOW/?path=500biggest/detail&com>, 1993-1998 employment data: <http://www.nan.shh.fi/NAN/Corp>; net income from company websites.

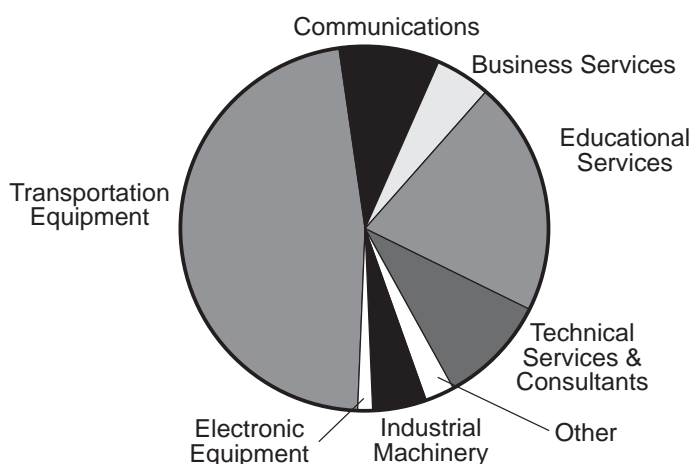
<sup>20</sup>Taouselämä, <http://www.wow.fi/WOW/?path=500biggest>; based on financial statements and Finnish accounting standards.

the offsets were purchases, representing 37 percent of the offsets to these companies, as shown in **Chart 10**. Purchases essentially aid recipient companies by creating demand for their products. Moreover, due to these aforementioned purchases, a company's need for employment will usually increase as well. As shown in **Chart 9**, the offsets to these companies in 1993 alone represented almost 20 percent of their combined total net income.

As stated in the Finnish Rules of Industrial Participation, Finland's requirement for offsets is founded on a desire to support small- and medium-sized businesses as they are entering the global marketplace, to increase employment, and to maintain or improve the overall health of the economy. See **Chart 10** for offsets by industry received by Finnish companies. In light of this notion, it is understandable that a chemical company struggling with plummeting net income figures received its offset portion in purchases of industrial chemicals, the company's main product. A large company producing communications equipment received offset benefits through purchases of its electronics and communications equipment; this satisfies the Finnish requirement for receiving offset credit because it is "benefiting high-level engineering industry, electronics industry, or other advanced industries in Finland."<sup>21</sup> In this particular case, a significant increase in the number of employees resulted in an even more staggering growth in net income. Whereas employment merely doubled, net income quadrupled. Arguably, there are many other factors contributing to a company's rapid growth; however, the trends show that these companies have increased employment and net income recently after receiving these offsets.

In addition to receiving offset benefits through purchases made by U.S. companies, many Finnish offset recipients also benefited from technology transfers. Transferring and introducing know-how and new technology to Finnish companies may not only have impacted a specific industry sector or company, but it is likely that it also may have strengthened the trend of growing investment in commercial research and development, an economic indicator signaling high level of innovation. As Finland is already a leader in investment in commercial research and development, offsets in this area are certainly not necessary for national security purposes.

**Chart 10**  
**Offsets by Industry for Finnish Companies Studied**



Source: U.S. DOC/BXA Offset Database

### 3.22 Israel: Foreign Military Financing and Offsets

The Industrial Cooperation Authority (ICA), a division of the Ministry of Industry and Trade, administers the Israeli offset policy, called industrial cooperation. The ICA monitors all industrial cooperation agreements made between government agencies and foreign firms. The Israeli government seeks long-term relationships between Israeli and foreign firms that will help Israeli companies find new access to global markets. The government places importance on subcontracting, technology transfer, investment, and market growth.

<sup>21</sup>Finnish Ministry of Defense, *Draft Agreement on Industrial Participation, Rules of Industrial Participation*.

---

Israel requires offsets from foreign companies on government procurements over \$50,000, for both defense and commercial goods. This minimum value is quite low compared to other countries (world average minimum defense contract requiring offsets is approximately \$15 million). While Israeli industrial cooperation agreements only require offsets equal to 35 percent of the procurement value, the offset is often much greater.

Between 1993 and 1998, U.S. defense companies entered into 23 new offset agreements with the Israeli government. These agreements had a total export value of \$945 million with a total offset value of \$468 million. These new agreements actually mandate offsets of 50 percent, higher than the 35 percent stated by the ICA. Over the same six-year period, U.S. defense companies partially fulfilled these and previous obligations with offset transactions totaling \$1.1 billion. Approximately \$588 million of these transactions were related directly to the sales items. These direct offsets included subcontractor production and technology transfers, allowing Israeli workers to manufacture components for the defense items the country was purchasing. The remaining transactions were required investments, which facilitated economic growth in Israel, increasing the competitiveness of Israeli companies.

Each year, the U.S. federal budget appropriates military aid in the form of foreign military financing (FMF) to Israel. In 1999, the U.S. government appropriated \$1.86 billion, requiring all but \$400 million be spent on U.S. military goods (78.5 percent of the funds must be spent on procurements from the United States). The FMF funds are given to Israel, who then pays U.S. prime contractors for goods.

Despite the fact that Israel receives funding to purchase the defense items from the United States (Egypt has a similar arrangement), Israel also requires offsets on its large defense procurements. U.S. prime contractors use offset packages to compete against each other to win these contracts. The offsets often take the form of direct investments into Israel or coproduction of the purchased defense item. With these offsets, Israel is purchasing a defense system that will be partly produced in Israel. Recently, the U.S. government agreed to allow Israel to waive provisions of the *U.S. Arms Export Control Act* that would have limited the amount of U.S. aid money that Israel could spend locally.<sup>22</sup>

Israeli companies often become competitors to U.S. companies, in many cases with the technology gained through partnerships and offsets. A U.S. company can form a joint venture with an Israeli company to co-develop new technology. This gives the U.S. defense prime contractor offset credits as well as an opportunity for earning profits. The partnerships may prove profitable for a U.S. contractor, but Israeli suppliers often displace former U.S. suppliers. Oftentimes, U.S. companies also bring technology to a partnership and also receive offset credit for the technology transfer.

### **3.3 Sophistication and Complexity**

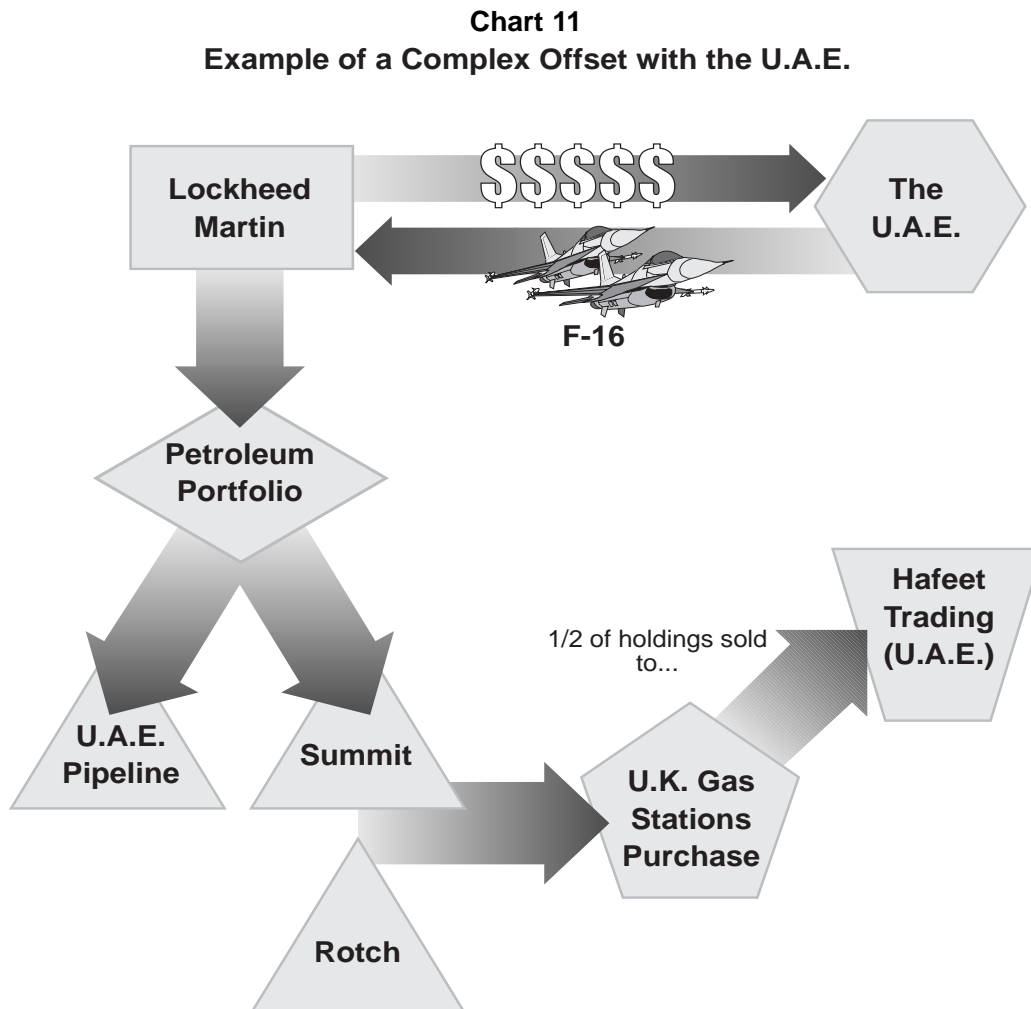
More and more countries are formalizing offset policies. For example, the Czech Republic, Brazil and Poland have recently implemented or revised offset regulations. Offset policies constantly change and become stricter as foreign governments redefine their defense and development needs. In order to adjust to this moving target, defense firms are becoming more creative in finding new means to fulfill offset obligations. In particular, firms are using a small but growing number of banking schemes, IPOs, business connections, and capital infusions into promising new companies, with some positive results. Firms apply these practices while focusing on a country's defense and development goals to offer the most enticing offset.

---

<sup>22</sup>“U.S. Agrees to Allow Israel to Spend More Aid at Home.” *Defense News*, Vol. 15 No. 24, June 19, 2000.

These new methods are increasing the complexities of offset transactions. For example, this year, Lockheed Martin signed an \$8 billion contract to sell 80 F-16s to the U.A.E.. Part of the offset obligation is expected to be fulfilled through investing \$160 million in a petroleum- related portfolio, which includes a natural gas pipeline through the U.A.E., as well as a United Kingdom start-up called Summit Corporate Services Ltd. Summit is trying to help the U.A.E. buy into oil tankers and European gasoline stations.<sup>23</sup> Summit, founded by an American, is partnering with another United Kingdom company, Rotch Property Group Ltd., to purchase gas stations in the United Kingdom. After the purchase, the partners plan to sell half of their holdings to a U.A.E. company, Hafeet Trading. This chain of financial dealings fulfills part of Lockheed's future offset obligations. **Chart 11** shows the complexity of this offset arrangement.<sup>24</sup>

The shift from traditional offset activity is difficult to capture in the data submitted by prime defense contractors for this report. The information presented here is largely anecdotal and taken from the media, company press releases, conferences, and discussions with industry.



Source: U.S. DOC/BXA Offset Database

<sup>23</sup>Pearl, Daniel, "Arms Dealers Get Creative With Offsets." *The Wall Street Journal*, 20 April 2000.

<sup>24</sup>*Ibid.*

---

## 4.0 Presidential Commission

### 4.1 Background and Structure

In July 1999, Senator Feingold introduced a bill entitled the *Defense Offsets Disclosure Act of 1999* which called for increased monitoring of the use of offsets in international defense trade.<sup>25</sup> This bill was incorporated into an appropriations bill that became law in November 1999. The legislation created the National Commission on the Use of Offsets in Defense Trade, and a parallel President's Council on Offsets in Commercial Trade was created by executive order. The purpose of the commission and parallel council is to study offsets, focusing in particular on their effect on the aerospace industry and its suppliers, as well as other high-technology industries, and to analyze their impact on national security.

The commission and council share the same members and are made up of six representatives from the private sector and five from the federal government. The private sector membership includes:

- R. Thomas Buffenbarger, International President of the International Association of Machinists and Aerospace Workers;
- Philip M. Condit, Chairman and Chief Executive Officer of the Boeing Company;
- Vance D. Coffman, Chairman of the Board and Chief Executive Officer of Lockheed Martin Corporation;
- Pierre Chao, Managing Director and Senior Aerospace/Defense Analyst, Credit Suisse First Boston Corporation;
- David C. Mowery, Professor of Business at the University of California at Berkeley;
- Ann R. Markusen, Professor of Planning and Public Affairs at the University of Minnesota.

The federal government representatives include five members from the executive branch, including one each from the Office of Management and Budget, the Department of Commerce, the Department of Defense, the Department of State, and the Department of Labor. In most cases, the secretary of the department has been appointed.

The commission and council have until the end of the year to report to Congress and the President on future U.S. policies regarding military and commercial offsets. As stated in the original legislation, the report is expected to include a strategy for unilateral, bilateral or multilateral negotiations toward a treaty on offset standards, with a goal of reducing any detrimental effects of offsets to the nation's economy.

### 4.2 Actions to Date

The commission and council held their first public meeting on December 4, 2000. The purpose of the meeting was to allow the commissioners to hear from expert witnesses about the impact of offsets on the nation's economy. The witnesses represented a wide range of views on offsets, from labor, academia, and private industry. The commission and council published an

---

<sup>25</sup>*Defense Offsets Disclosure Act of 1999* (P.L. 106-113, Div B, S1000(a)(7) [Div.B, Title XII, Subtitle D (SS 1241 to 1247)], Nov. 29, 1999, 113 Stat. 15.

---

interim report in January 2001. The next meeting is planned for the summer of 2001, when the newly appointed administration officials will meet for the first time.

For more information about the activities of the Commission and Council, please see their website at <http://www.offsets.brtrc.net/>.

## Appendix E of the Offsets Report

Country	Title Of Offset Policy	Agency Handling	Offset Part Of Procurement Decision	Offset Sector	Minimum Value Of Contract Requiring Offsets	Minimum Offset Requirement (%)	Term	Multipliers	Penalties	Focus	Direct vs Indirect	Eligible Offset Activities
Australia	Australian Industry Involvement (AII) (Not Termed "Offset", But SIDA's)	(DoD) Defense Acquisition Organization	No	Civilian & Military	A\$2.5M Foreign Content/Any Tender Of A\$5M	Maximized Where Cost Effective	Not Defined	None In Policy	During Project, Strict Review Of SIDA's. If Not Completed, Not Credited. Must Fulfill Obligation	Local Content (Australia & New Zealand), (SIDA)	Both	Local production, R&D, Tech Transfer, Training, Export Sales, Infrastructure, Collaborative Ventures
Belgium	Industrial Benefit In The Field Of Defense Procurement (Economic Compensations)	Ministry of Economics	Yes	Civilian & Military	Not Specified	100%	Not Defined	None In Policy	Penalty For Non-Executed Obligation	High Technology	Both	Coproduction, Direct Supplies & Services, Tech Transfer, R&D
Canada	Industrial & Regional Benefits (Will Not Use Term "Offset")	Industry Canada	Yes	Civilian & Military	C\$2M - Preferred C\$100M - Required	100%	Not Defined	None In Policy	Performance Guarantee Utilized	Economy, Job Creation, Technology, Politics	Both	Well defined
Denmark	Industrial Cooperation Agreement (ICA)	Ministry of Economics	Yes	Civilian & Military	25 Million DKK (Approximately 3.8 Billion U.S.\$)	100%	Not Defined	None In Policy	Performance Guarantee Utilized	Defense & Technology Similar To Product Purchased	Both	Technology Transfers, Defense, Aerospace Industries, etc.
Egypt	No Official Policy	Not Specified	Ad Hoc Basis	Military	Not Specified	Low	Not Defined	None In Policy	Not Defined	Defense Industry Development & Support	Direct	Direct Technology Transfer
Finland	Industrial Participation	Trade Ministry (& Finnish Committee on IP)	Yes	Civilian & Military	Largest Defence Material Purchases	100% + Marketing Consulting	Not Defined	1-3 Times If Finnish Products Are Exported	Penalty: Exclusion From Future Bids Until Contract Fulfilled	Participation Of Domestic Defense Industry, Technology, Export Internationalization Of Exports	Both	Transactions That Benefit Economy & Industries, Technology Transfer
Germany	Industrial Balance, No Official Policy	The Federal Office For Defense Technology & Procurement	Yes	N/A	N/A	Aim is 100%	N/A	N/A	N/A	German Company Participation From The Inception Of A Project, Balance Globalization With Growth Of Local Cost	Both	If Just Procurement Contract, Co-production Required

## Appendix E (Continued)

Country	Title Of Offset Policy	Agency Handling	Offset Part Of Procurement Decision	Offset Sector	Minimum Value Of Contract Requiring Offsets	Minimum Offset Requirement (%)	Term	Multipliers	Penalties	Focus	Direct vs Indirect	Eligible Offset Activities
Greece	Policy of Offset Benefits (O/B)	Hellenic Ministry of National Defense/General Armaments Directorate (GAD)	Yes	Military	250 Million Drachmas	80-120%	Not defined	Very Complex, Depends on Value, Offset & Recipient Maximum is 12	10%	Defense Industry & Coproduction	Direct	Require: (Coproduction) Local Content, Joint Ventures, Technology Transfers
Israel	Industrial Cooperation Agreement (ICA)	Industrial Cooperation authority (ICA), Ministry of Trade and Industry	No	Civilian & Military	U.S. \$100,000	35%	Usually 3 years, may be extended to 10 years	1-2 Times, dependent upon type of offset	No Liquidated damages clause	Development of close, long-term working relationships	No distinction	Subcontracts, R&D work, Tech Transfer, Investment, Global Market Access & Exposure
South Korea	Policy Of Offset Benefits (O/B)	Ministry Of National Defense	Yes	Military	\$10M	30%	Not Defined	0-6 Times Based On Type Of Offset	Debarment From Participating For Non-adherence To Offset Obligation	High Technology, Must Be More Than 30% Of Contract	No Distinction	Mainly Technology Transfers, Also Employment, Equipment, Purchases & Other
Kuwait	Offset Program	Ministry Of Finance, Program Executive Office PEO	Yes	Civilian & Military	KD 1 Million, Sum Of Contracts In 1 Year	30%	8 Years With Intermediary Steps Of Completion	2-10 Times Based On Activity & Sectors	6% Of Total Contract	Technology Transfer & Training	No Distinction	Expenses Of Joint Ventures With Local Parties
Netherlands	Industrial Participation & Offset	Ministry of Economics	No	Military	5 Million Guilders	100%	10 Years	1-3 Times If Finish Products Are Exported	5% of Late Portion, Must Still Fulfill Obligation	Technology Similar To Product Purchased	Mix with Original Focus On Direct	Counter-Purchase, Coproduction, Licensed Production
New Zealand	Defence Offsets Policy/Industrial Involvement	Minister Of Defence & Ministry Of Commerce	No	Military	NZ \$5 Million	30%	Not Defined	1-3 Times	Liquidated Damages	Stimulate Growth & Employment, Sustainable Activities	No Distinction	R&D, Technology Transfer, Joint Ventures, Training, Export Marketing, Etc.
Norway	Industrial Policy, Offset Program	Royal Norwegian Ministry Of Defence	Yes	Civilian & Military	NOK 50 Million	100% Contract Value	Not Defined	N/A	Performance Guarantee Utilized	Technology Similar To Product Purchased	No Distinction	Well Defined

## Appendix E (Continued)

Country	Title Of Offset Policy	Agency Handling	Offset Part Of Procurement Decision	Offset Sector	Minimum Value Of Contract Requiring Offsets	Minimum Offset Requirement (%)	Term	Multipliers	Penalties	Focus	Direct vs Indirect	Eligible Offset Activities
Philippines	Countertrade (Implementing Rules & Regulations)	Department of Trade & Industry Through the Philippine International Trading Corporation	Yes	Civilian & Military	U.S. \$1 Million	50%	3 Years After From Execution Of The Contract (2 Years Grace Period)	2-5 Subject To The Value Of The Desired Activities	Non Performance Ranging From 5% To 100%	Foreign Capital Equipment, Machinery & Services	Indirect	Co-production, Countertrade, Or Barter
Saudi Arabia	Offset Program	Economic Offset Committee (Ministry of Defense & Aviation)	Yes	Civilian & Military	Not Specified	35%	Within 10 Years	Subject To Approval Of Offset Authority	Best Efforts But Reconsidering Policy	Job, Training, Technology Transfer, Investment	Mix with Original Focus On Direct	Investments In Joint Ventures With Local Parties
South Africa	National Industrial Participation (IP)	Department of Trade & Industry	Yes	Civilian & Military	Import Content Greater Than U.S. \$10 Million	100%	7 Years	1-2 Subject To Type Of IP	5% (on Unfulfilled) Performance Guarantee	Develop Industry, Technology Transfer, Job Creation	No Distinction	Foreign Investment, Exports, R&D, Technology Transfer
Spain	Industrial Cooperation	Ministry of Defense (Industrial Cooperation Directorate/Management Office)	Yes	Military	N/A	100% Expected Contract Value	Not Defined	None In Policy	None In Policy	Technology Similar To Product Purchased Economy, Domestic Industry	Both	Evaluated On Case By Case Basis, Prefer Partnerships With Domestic Firms
Sweden	Offset & Participation Program	DoD Defense Material Administration (FMV)	Yes	Civilian & Military	100 MSEK	N/A	Not Defines	Non In Policy	Performance Guarantee Utilized	Strengthen Domestic Defense Industry	Both	Co-Production, Technology Transfer, Etc.
Switzerland	Defense Procurement & Offset Policy	DoD	Yes	Civilian & Military	50 Million Swiss Francs	100%	Not Defined	None In Policy	Performance Guarantee Utilized	Retain Domestic Industry Independence, Overcome Trade Barriers	Both	Co-Production, Cooperation With Universities, Export Assistance
Taiwan	Industrial Cooperation Program (ICP)	Ministry of Economic Affairs & Industrial Development Bureau (IDB), Committee For Aviation & Space Industrial Development	Yes	Civilian & Military	%50 Million	30-40%	N/A	1-10 Times, Based On Type of Offset	N/A	Upgrade Industrial Technology, Increase Quality Of Workforce, Globalization	Both	Local Procurement, Technology Transfer, Training, Research & Development, Marketing

## Appendix E (Continued)

Country	Title Of Offset Policy	Agency Handling	Offset Part Of Procurement Decision	Offset Sector	Minimum Value Of Contract Requiring Offsets	Minimum Offset Requirement (%)	Term	Multipliers	Penalties	Focus	Direct vs Indirect	Eligible Offset Activities
Thailand	Countertrade Policy	Department Of Foreign Trade, Ministry Of Commerce	Yes	Civilian & Military	\$300 Million Bath	20-50%	2 Months Prior To End Of Contract	None In Policy	5% (On Unfulfilled Performance Guarantee	Enhance Trade, Prevent Impalance Of Trade	Indirect	Counter-Purchase
Turkey	Military Offset Policy & Guidelines	Under-secretariat For Defense Industries (SSM)	Yes	Military	U.S. \$5 Million	30% Of Contract, 50% Of Project Import Value, Will Change To 100%	Not Defined	1-5 Times, Based On Type Of Offset	10% (On Unfulfilled) & Temporary Exclusion From Future Bids	Self-sufficiency, New Business Opportunities, Increase Foreign Currency Inflow, Improve Quality	Both	Exports, Technology Transfer, R&D, Training, Investments, Etc.
United Arab Republic	The Defense & Procurement Policy Of The UAE	United Arab Republic Offsets Group	Yes	Military	U.S. \$10 Million	60%	7 Years	Yes But Unpublished	8.5% Of Offset Obligation Or 4.5% Of Total Contract	Sustainable Wealth Creation	No Distinction	Profits Of Joint Ventures With Local Parties
United Kindgom	Industrial Participation	MOD/DESO	No	Military	L10M (\$16.10M)	100%	Over Period Of Procurement Contract	N/A	None, However Strict Enforcement Of IP Program	Provide New Business Opportunities/ Technologies & Maintain A Credible Defense Industry	No Distinction	Defense Related Or Civilian High Technologies Through Defense Manufacturer & Be "New Work"

Countries that currently do not have a defense related offset policy: Argentina, Cameroon, Croatia (ad hoc), Hungary (policy not defined but offsets are practiced), Malaysia, Bangladesh, India (currently forming a policy), Italy Jordan, Kenya, Pakistan, Peru, Thailand.

---